

## CLAIMS

1. An intra-osseous implant for placement in bone of a human or animal body comprising at least

5 one intra-osseous part intended for placement in said bone tissue having an apical side and a cervical side and composed of a body friendly material, which part is provided on its circumferential surface with a screw thread running in the direction of the apical end; and

10 a support part present at said cervical side of said at least one intra-osseous part intended for supporting a prosthetic element, **characterized in that** the intra-osseous part is provided with one or more grooves extending in longitudinal direction and interrupting the screw thread into multiple interrupted screw thread parts, said multiple interrupted screw thread parts serving as retention elements 15 allowing the placement of the implant in longitudinal direction into said bone tissue but preventing the removal of the implant in opposite longitudinal direction out of said bone.

2. An intra-osseous implant according to claim 1, **characterized in that** the groove extends over the entire length of the 20 intra-osseous part of the implant.

3. An intra-osseous implant according to claim 1 or 2, **characterized in that** the depth of the groove is smaller, equal or greater than the height of the screw thread.

4. An intra-osseous implant according to any one of the 25 preceding claims, **characterized in that** the width of the groove varies in the direction of the apical side of said intra-osseous part and more in particular widens.

5. An intra-osseous implant according to any one of the preceding claims, **characterized in that** the depth of the groove varies in 30 the direction of the apical side of said intra-osseous part and more in particular becomes larger.

6. An intra-osseous implant according to any one of the preceding claims, **characterized in that** the height of the screw thread varies in the direction of the apical side of said intra-osseous part and more in particular becomes smaller.

5 7. An intra-osseous implant according to any one of the preceding claims, **characterized in that** the intra-osseous part comprises multiple grooves.

8. An intra-osseous implant according to any one of the preceding claims, **characterized in that** the grooves are present in an 10 equidistant manner in the circumferential surface.

9. An intra-osseous implant according to any one of the preceding claims, **characterized in that** the intra-osseous part has a cylindrical cross section.

10. An intra-osseous implant according to any one of the 15 preceding claims, **characterized in that** the intra-osseous part has a near cylindrical cross section, for example a conical, elipsonal, oval cross section.

11. An intra-osseous implant according to any one of the preceding claims, **characterized in that** the intra-osseous part has a 20 polygonal cross section, for example a hexagonal or octagonal cross section.

12. An intra-osseous implant according to any one of the preceding claims, **characterized in that** the intra-osseous part becomes smaller in the apical direction.

25 13. An intra-osseous implant according to any one of the preceding claims, **characterized in that** the support part is positioned under an angle on said intra-osseous part with respect to the direction of implant.

14. An intra-osseous implant according to any one of the 30 preceding claims, **characterized in that** the implant is a dental implant, wherein said support part is provided with at least one bevel (flattening concavity) on its circumferential edge.